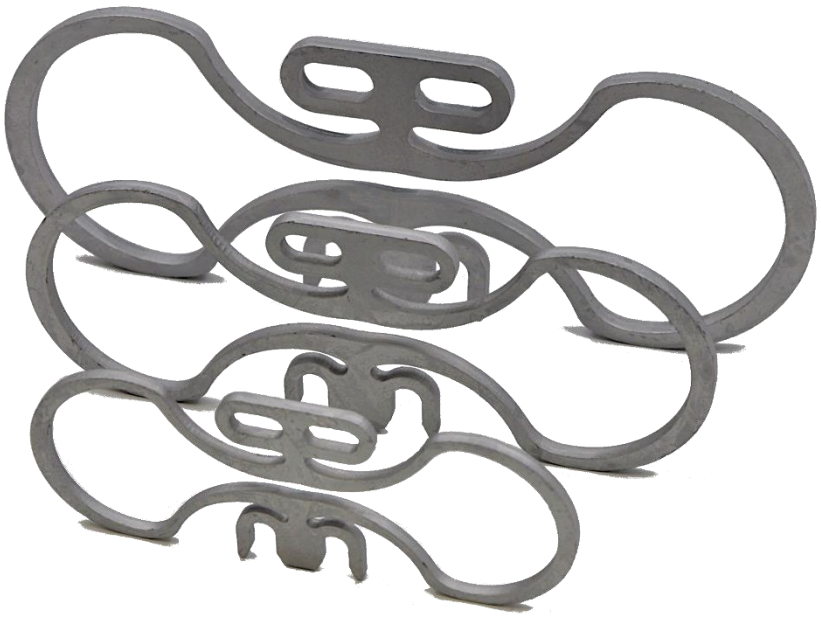
Infini Spring® – High Strength-series



What?

- A low frequency multi-directional vibration isolator*

Why?

- One-piece high strength steel component
- Thin and low – transversal attachment
- Temperature range -40…+200°C
- For any mounting direction**

Where?

- Rotational machines: fans, pumps, compressors, generating sets
- Vibratory machines: conveyors, screens, shakers
- Sensitive equipment: electric cabins, laboratory devices
- Construction: pipework, room isolation

How?

- Select the springs according to mass of your device. *Example: mass = 400 kg, four springs → 400/4=100 kg/spring → 8HS130 springs according to Table 1.*
- Infini Spring works best when the rotational speed is higher than recommended lowest speed.

Table 1. Vertical nominal loads and rotational speeds of a single spring.

Model	Nominal load range [kg]	For rotational speeds [RPM]
3HS20	15-20	>755
4HS35	25-35	>655
5HS50	40-50	>585
6HS75	60-75	>530
8HS130	100-130	>460
10HS200	165-200	>410
12HS300	245-300	>375
If the mounting direction is transversal or longitudinal, nominal load range is approximately 60% lower. *Example: transversal installation with 5HS50 springs → nominal load range is 0.4*(40 -50 kg) = 16-20 kg.* Note! Rigid body natural frequencies and elastic natural frequencies of the installation also to be considered.		

*Vertical natural frequency 6-12 Hz
**Allowable load varies dependently

Table 2. Maximum vertical natural frequencies when using nominal load range.

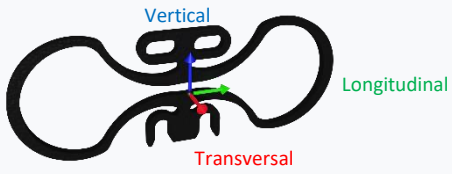
Model	Vertical natural frequency	
3HS20	< 11.7 Hz	
4HS35	< 10.1 Hz	
5HS50	< 9.1 Hz	
6HS75	< 8.3 Hz	
8HS130	< 7.2 Hz	
10HS200	< 6.4 Hz	
12HS300	< 5.8 Hz	
Natural frequencies in transversal direction are approximately 45% lower and natural frequencies in longitudinal direction are approximately 10% lower. *Example: transversal natural frequency with 8HS130 springs → frequency is 0.55*7.2 Hz = 4.0 Hz.*		

Table 3. Maximum loads and deflections with spring constants in all directions.

Model	Maximum load in vertical direction [N]	Spring constant in vertical direction [N/mm]	Maximum deflection in vertical direction [mm]	Maximum load in transversal direction [N]	Spring constant in transversal direction [N/mm]	Maximum deflection in transversal direction [mm]	Maximum load in longitudinal direction [N]	Spring constant in longitudinal direction [N/mm]	Maximum deflection in longitudinal direction [mm]
3HS20	247	102	2.4	94	30	3.1	112	80	1.4
4HS35	439	136	3.2	167	41	4.1	199	106	1.9
5HS50	685	170	4.0	261	51	5.1	311	133	2.3
6HS75	993	204	4.9	380	61	6.2	450	159	2.8
8HS130	1753	272	6.5	669	81	8.2	797	213	3.7
10HS200	2740	340	8.1	1047	101	10.3	1247	266	4.7
12HS300	4000	408	9.8	1520	122	12.4	1800	319	5.6

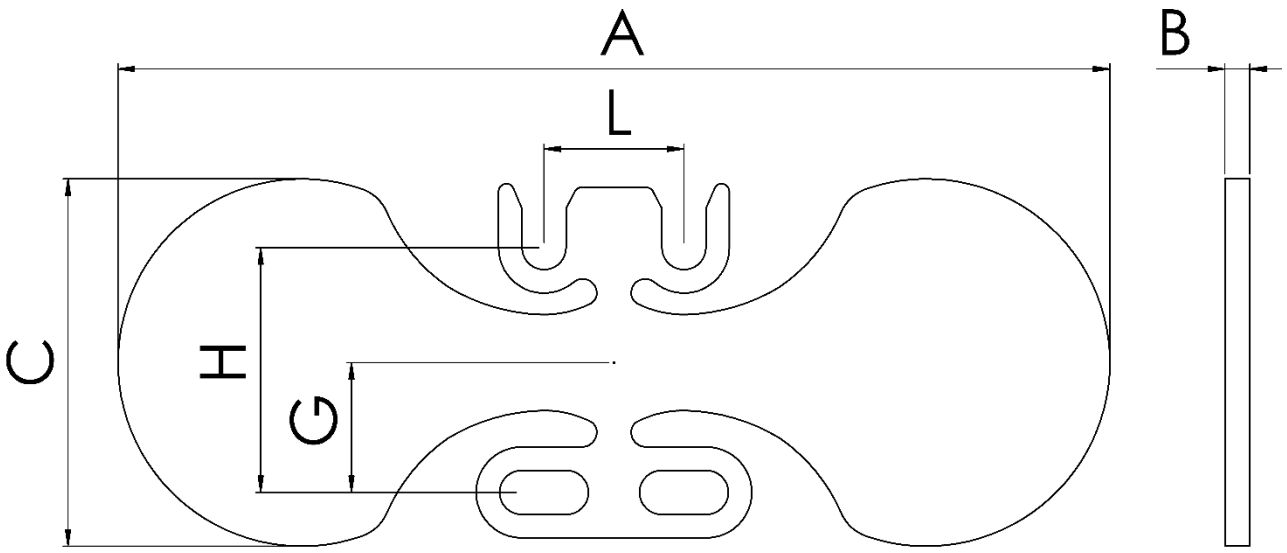


Table 4. Dimensions of the Infini Springs. Dimensions in mm.

Dimension	3HS20	4HS35	5HS50	6HS75	8HS130	10HS200	12HS300
A	119	158.7	198.3	238	317.3	396.7	476
B	3	4	5	6	8	10	12
C	44	58.7	73.3	88	117.3	146.7	176
H	30	38	49	57	74	91	101
L	16	22	28	34	44	54	60
G	16	20	26	30	39	48	53
Fasteners							
Size	M5 8.8	M6 8.8	M8 8.8	M10 8.8	M12 8.8	M16 8.8	M16 8.8